



VRVS and The Access Grid Gateway

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Outlines

- **VRVS: Background Information**
- **The basics of an AG Gateway**
- **VRVS Access Grid Gateway**
- **How to create an Access Grid Venue in the VRVS system ?**
- **How to Join an Access Grid Venue via VRVS ?**



VRVS: What it is ?



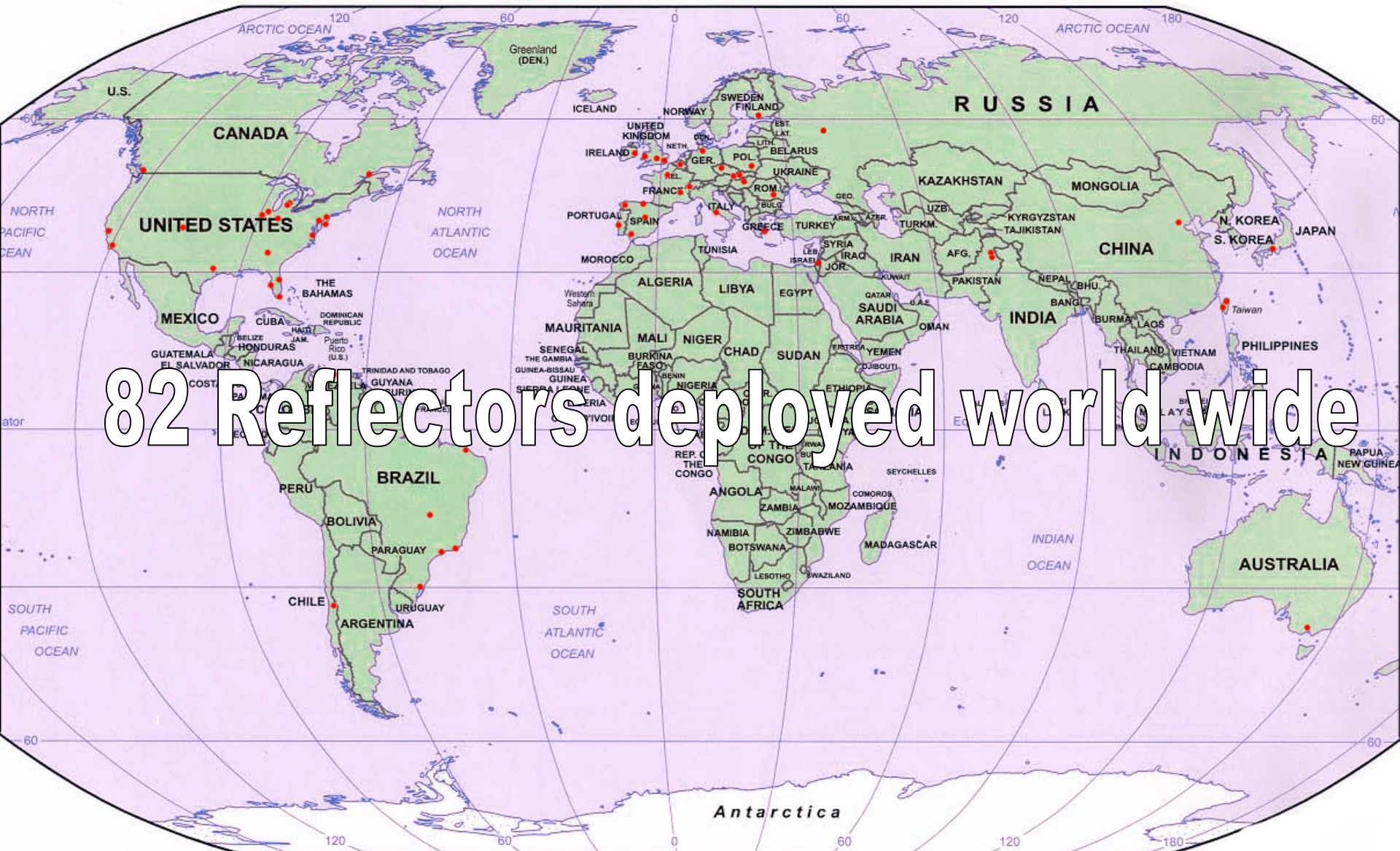
- ◆ **VRVS is a realtime distributed system which provides a scalable communication infrastructure for large collaboration dispersed all over the world.**
- ◆ **Different technologies and protocols are supported (and mixed) and allow users to connect their preferred videoconference.**
- ◆ **Supports Mbone, H.323, SIP, QuickTime, Access Grid, JMF and MPEG2.**
- ◆ **The system is composed of 1 main server and several reflectors (network servers) spread around the world.**



VRVS Web Service Design



- ◆ **Unified Web User Interface** to schedule and join/leave a meeting independently of the application.
- ◆ **Multi-platform: Windows, Linux, MacOS and Unix.**
- ◆ **Easy to use:** Everybody knows how to click on a web page today.
- ◆ **Virtual Room Concept, Scheduling;** Create a virtual space where people can exchange real-time information.
- ◆ **Join or Leave a Collaborative session anytime.** *Do not need to know in advance how many participants and booked ports capacity. Just announce the meeting and people will join from anywhere.*
- ◆ **Full Documentation and Tutorial**
- ◆ **Self service:** Don't need a technician or expert to organize and join a conference.



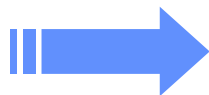
82 Reflectors deployed world wide

The Basics of an AccessGrid Gateway

Remote Management



Easy Access



AccessGrid Gateway

Audio

Video



Messenger -SIP





The VRVS / AccessGrid Gateway



- **Multicast / Unicast bridge**
 - ✓ We use the VRVS reflectors to map a AG Venue with a VRVS Virtual Room
- **Several Multicast / Unicast Streams**
 - ✓ Several AG Venues map to VRVS Virtual rooms
- **Support for several clients (not only Mbone Application)**
 - ✓ Already built-in in VRVS
- **Friendly User Interface to Join a meeting**
 - ✓ Via the VRVS Web Interface
- **Friendly User/Admin Interface to run an AccessGrid Multicast Gateway**
 - ✓ Via The VRVS Web Admin Interface



The VRVS / AccessGrid Gateway (2/2)



➤ Include some “Intelligence” in the packets processing

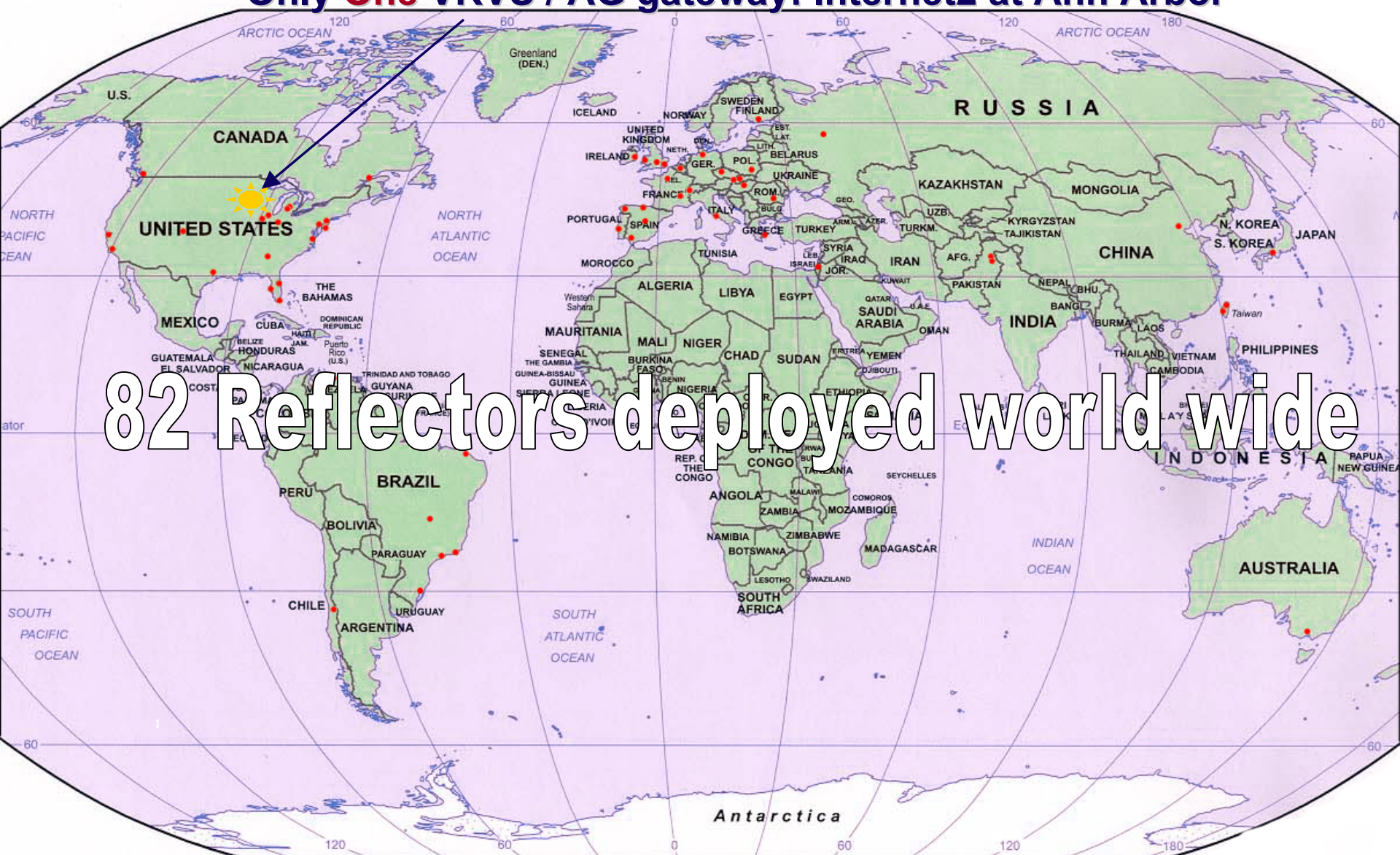
Audio:

- ✓ All Audio streams are mixed for VC client capable to decode only one audio stream (i.e. H.323)
- ✓ All Audio codecs supported by RAT (including L16-16Khz) are transcode to G.711 when mixed.

Video:

- ✓ User can selected the video streams that he wish to receive. From all video streams, few selected video streams or just 1 stream.
- ✓ User can select the timer-switch mode (automatic round-robin selections of video streams)

Only **One** VRVS / AG gateway: Internet2 at Ann Arbor





Creation of an AG Venue



VRVS Web Administration - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

https://dev1.vrvs.org:444/vr_table.php?vr_id=28&srv=1

Instant Message WebMail Calendar Radio People Yellow Pages Download Customize...

VRVS Web Administration

Production Server (Vrvs01)

Servers
Vrvs01
Hepvid1

Database
Cities
Communities
Machines
Reflectors
Users
Virtual Rooms
World Regions


Reflector Monitoring
Monitor Peers
Monitor VR/Hosts

Statistics
Bookings
Machines
Reflectors
Users
Virtual Rooms
HEP Experiments
Labs (takes awhile)

Logout

Select a Virtual Room
Aguila - Spain(RedIRIS)
Amazonia - Brazil(RNP)
AMPATH - CIARA
Angaita - Chile(REUNA)
Artistic and Cultural Apps - AccessGrid
Auyantepui - Venezuela(REACIUN2)
Axon - NCSA-AG
BigHorn - ANL-AG
BNI Office - Internet2
Boat - Transport
Bones - MEDICAL
Brasilia - Brazil(RNP)
Bridgeport - ANL-AG
Buitre_Leonado - Spain(RedIRIS)
Burro - Spain(RedIRIS)

Order by VR
Order by Community



Virtual Room ID	Room Name	Community	Visible
28	Lobby	ANL-AG	Yes

Creation Time (YYYY-MM-DD HH:MM:SS)	Destruction Time (YYYY-MM-DD HH:MM:SS)	Video Codec	Audio Codec
2002-05-13 14:09:53		H.261	G.711

Picture File	Password	Duration
ANL-AG/Lobby.jpg		

Mcast Video Address	Mcast Video Port	Mcast Audio Address	Mcast Audio Port
224.2.177.155	55524	224.2.211.167	16964

Max No. Particip	Max Speaker Bdwth	Max Audience Bdwth	Action
			Modify Add Delete

Give the AG Venue Name

Give the Video/Audio Multicast Addresses and Ports

Give the Video/Audio Multicast Addresses and Ports



Joining an AG Venue



Virtual Rooms version 3.4 (VRVS) - Microsoft Internet Explorer

File Edit View Favorites Tools Help Send

Back Forward Stop Home Search Favorites Media Mail Print Address Bar

Address http://www.vrvs.org/ Go Links

Google Search Web Search Site Options

VRVS Please Start

Documentation

START

VISIT

VRVS Announcements

- 07 Mar - First intercontinental videoconference from the air using Caltech's global collaboration system. [Photos](#).
- 11 Mar - VRVS at the Slovakian Education Ministry. [photos](#).
- 09 Mar - The [Particle Physics MasterClasses](#) are taking place in VRVS. [photos](#).
- 01 Mar - The [Slovak Academic information days](#) hold by VRVS! [photos](#).
- 31 Jan - ILC (International Linear Collider) community with dedicated VR has been created.
- 27 Sep - VRVS [extends its collaboration](#) to all NRNs.

- 07 Apr - Users attached to CERN-EU: the reflector ip has been changed. Please check your firewall settings. In case of trouble please contact [VRVS Support](#).
- 01 Mar - [New VRVS Applications](#) have been released [the 1st of March](#).
- 09 Dec - [New version 1.2 of PocketVRVS](#) that improves [problems](#).
- 01 Sep - How to setup Windows XP SP2 for VRVS : [read](#).
- 09 Dec - Look at our [Recommendations page](#).
- 25 Nov - Report your problems to the [VRVS Support](#).

56061 machines & 15519 users
139 new users in past week
22 new users in past day

email us

Internet

START:
Register or Login into VRVS

Virtual Rooms version 3.0.0.10 (VRVS) - Microsoft Internet Explorer

Registration Process

Bell Sympatico GetEmail Login here

VRVS Virtual Rooms

Profiles are Users oriented (instead of machines oriented) to facilitate activity tracking and increase security

Community concept to create user groups with dedicated/reserved resources

Automated update of TMZ (global and seasonal)

Your profile

Login *3 characters at least*

Password **re-type Password**

First Name **Last Name (Family)**

Email **Home Page**

Phone **Community**

Location - Time Zone

CLEAR **HELP** **SUBMIT**

EFDA
-To Select-
EFDA
Globe
Internet2
RedIRIS
ThinkQuest



Virtual Rooms version 3.0beta10 (VRVS) Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print Folders

Links Horde Toon Boom Studio The complete 2D desktop Animation Application Bell Sympatico GetEmail Login here Virtual Rooms version 3.0beta10 (VRVS)

Address http://131.215.126.205/VRVS.html Go

VRVS Please Login

Documentation

Download

LOGIN

Your profile

Your Machine

Your personal information has been saved.
To be able to login into VRVS you must now validate your registration.
An automatic email has been sent to you (fgariepy@fido.ca) with the validation URL.

Please **check your email and validate your registration** with the **url received** or **type the validation key here**.

KEY

SUBMIT

User registration is validated through a key sent by email.

Account is activated only when the key is entered.

Do these modifications on my Profile Internet



A dialog box titled 'Enter Network Password' with a question mark and close button in the title bar. It contains a key icon and the text 'Please type your user name and password.' Below this, it shows 'Site: dhcp-126-205.caltech.edu' and 'Realm: VRVS Users Authentication'. There are two text input fields labeled 'User Name' and 'Password'. At the bottom, there is a checkbox labeled 'Save this password in your password list' and two buttons: 'OK' and 'Cancel'.

Access is protected by Username/Password to identify each user (Users Oriented Profile)



VRVS version 3.4 (Virtual Rooms Videoconferencing System) - Microsoft Internet Explorer

File Edit View Favorites Tools Help [Send](#)

Address <http://www.vrvs.org/cgi-perl/Auth/login> Go Links >>

Google Search Web Search Site Options

VRVS vrvs team

Group: ALL Virtual Room: ALL Time Zone: GMT_-7_summer

List of ongoing Meetings

Monday, April 25, 2005

All communities selected. Go back to **VRVS TEAM** community.

Virtual Room	Started	Finishat	Subject	options	Community
Cafe				Cafe	Universe
Ultralight				Ultralight	Universe
Forest	10:00	14:58	FPD Task Force		Universe
Plane	11:30	15:28	Rochester meeting		Universe
Hawaii				Hawaii	Internet2
DIII-D				DIII-D	FUSION
X-Point					FUSION
Holodeck					ASTRO
Pi					HENP
Varela				Varela	Chile(REUNA)
Library				Library	Slovakia(SANET)
Saint Germain				Saint Germain	France(RENATER)
Capuccino				Capuccino	Italy(INFN)
Kahvila				Kahvila	Finland(FUNET)
Cafe Brazil				Cafe Brazil	Brazil(FNP)
DANTE-CAFE				DANTE-CAFE	GEANT2(DANTE)
GN2-JRA1				GN2-JRA1	GEANT2(DANTE)
GN2-JRA2				GN2-JRA2	GEANT2(DANTE)
GN2-SA3				GN2-SA3	GEANT2(DANTE)
CIARA-Cafe				CIARA-Cafe	CIARA
Auyantepui	06:00	17:28	Pruebas VC		Venezuela(REACTIUN2)

Documentation
Download
Booking
ENTER
Profile
LOGOUT

Access to the AG Virtual Venues

Click Enter

Current Meeting and Permanent Virtual Room

VAccessGrid



VRVS version 3.4 (Virtual Rooms Videoconferencing System) - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.vrvs.org/cgi-perl/Auth/login> Go Links

Google Search Web Search Site Options

VRVS vrvs team

Group: ALL Virtual Room: ALL Time Zone: GMT_-7_summer

ACCESSGRID selected.

Documentation Download Booking ENTER Profile LOGOUT

Virtual Room	Started	Finishat	Subject	options
BigHorn	0		BigHorn Venue	
Bridgeport	0		Bridgeport Venue	
Dantooine	0		Dantooine Venue	
FullSail	0		FullSail Venue	
JackFrost	0		JackFrost Venue	
Kamar			Kamar Venue	
Lobby			Lobby Venue	
LuckyLabrador			LuckyLabrador Venue	
Talus			Talus Venue	
Windmer	0		Windmer Venue	
Internet2	0		Internet2 Venue	
Axon	0		Axon Venue	
CosmicVoyage	0		CosmicVoyage Venue	
Hydrogen	0		Hydrogen Venue	
Landspout	0		Landspout Venue	
MonteCarlo	0		MonteCarlo Venue	
Mosaic	0		Mosaic Venue	
Optiverse	0		Optiverse Venue	
Walkabout			Walkabout Venue	
NSF			NSF Venue	
Artistic and			Artistic and Cultural Apps Venue	
Collaborati			Collaborative Tools Venue	
Edinburgh			Edinburgh Venue	
Expanding Uses of the AG	0		Expanding Uses of the AG Venue	



Leave VAccessGrid










Leave the AG Virtual Venues

Current AG Venues defined in the VRVS system

Sending Video

Lobby Virtual Room - Microsoft Internet Explorer

VRVS  **Lobby Virtual Room**
11 participants connected 

 <u>Argonne Library</u> (Video) -D-AG-	 <u>Iowa State University</u> (Right) -D-AG-	 <u>Tim Urban</u> -D-AG-	 <u>Argonne Library</u> (Video) -D-AG-	 <u>Argonne Library</u> (Video) -D-AG-
 <u>Iowa State University</u> (Middle) -D-AG-	 <u>Argonne Library</u> (Video) -D-AG-	 <u>Argonne Library</u> -D-AG-	 <u>Tim Urban</u> -D-AG-	 <u>Iowa State University</u> -D-AG-
 <u>Argonne Library</u> -D-AG-				

VRVS Control Panel

Video Application running

Audio Application running

Main | Participants | Video Modes | Sharing | Client Setup

"Lobby Room" Current Time
14 : 32 : 23

☒ APPLET
☐ AUDIO
☐ VIDEO
☐ SHARING

☐ Audio Only ☐ Loopback



Video Streams Received

Video Application
running

Audio Application
running

VRVS Virtual Room / AG Venue

The screenshot displays the VRVS Virtual Room interface. At the top, a grid of video streams is shown, including 'Montana Tech CBB009 HCI LAB (Camera 1/2)', 'Tim Urban', 'Iowa State University (Middle)', 'Argonne Library (Video)', 'Argonne Library (Video) (Right)', and 'Argonne Library (Video)'. Below this, a 'Lobby Virtual Room' window is visible, showing 11 participants connected. The lobby window includes a 'Main' tab with 'Disconnect MBone Tools' and 'Support' buttons, and a 'Participants' tab. A 'Chat service for the Lobby Virtual Room' window is also open, showing a list of participants and a chat area. The bottom of the screen shows the Windows taskbar with various application icons and the system clock at 2:39 PM.



Video Streams Received

Video Application running

Audio Application running

Video Mode: Only 2 names selected

Tim Urban

Argonne Library (Video)

7 April 2005

NEW VRVS APPLICATIONS
compatible with
all H.323 clients!!

Users attached to CERN-EU: the reflector ip has been changed. Please check your firewall settings. In case of trouble please contact VRVS Support.

New VRVS Applications have been released the 1st of March.

VRVS : read this

Support.

Its Research Collaboration Worldwide

ation networks and major research projects around the globe

yle real-time infrastructure supporting all protocols for a

laboration

for complete news

Education Network (NREN) Partners so far.

Vic: Lobby Virtual Room

Display Dock Display modes Transmit

Tim Urban
5.0 f/s 5 kb/s (0%)

Argonne Library (Video)
24 f/s 34 kb/s (0%)

Total Received: 39 kb/s

Minimize Settings Help Quit

CHAT: Lobby Virtual Room

Listen

Talk

Minimize Dock Settings Help Quit

Chat service for the Lobby Virtual Room

Messages

Participants

:ttttt: ,ii
:ttttt:tt: tt
ttt .: tt
tt, :tttt
ttt .: tt
:tttt:tt: tt
:tttt: ,ii

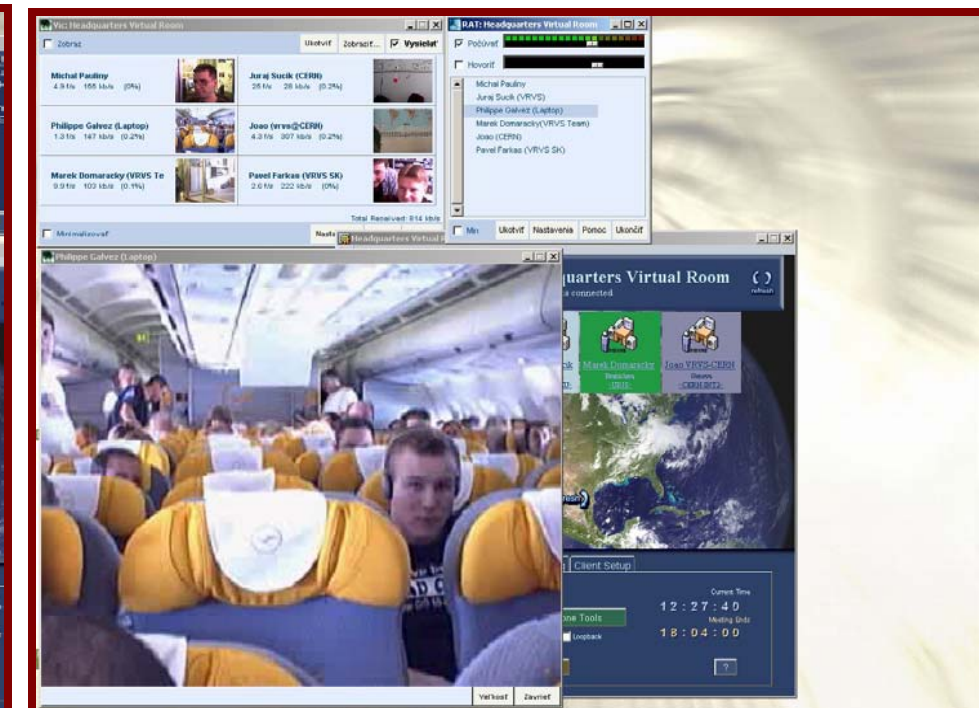
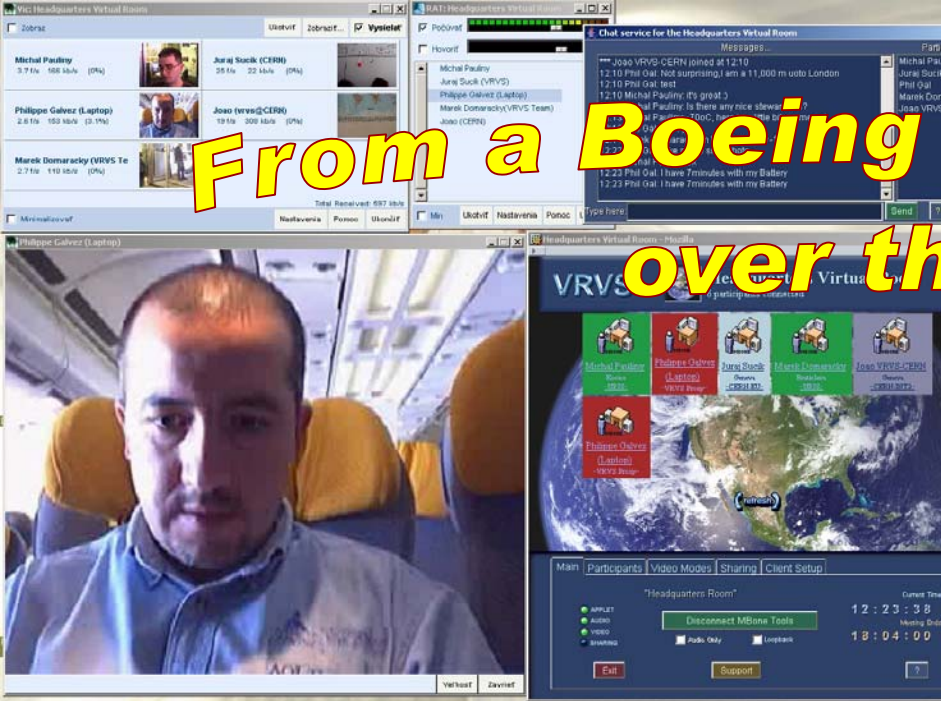
Type here: Send ? CLOSE

Start

VRVS S...

VR

2:43 PM



Thank you

www.VRVS.org

Contact@VRVS.org

Support@VRVS.org